

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

NANOBEBE US INC.,
Plaintiff,
-against-
MAYBORN (UK) LIMITED et al.,
Defendants.

21-cv-08444 (JLR)

OPINION & ORDER

JENNIFER L. ROCHON, United States District Judge:

Plaintiff Nanobebe US Inc. (“Plaintiff” or “Nanobebe”) brings this action against Mayborn (UK) Limited, Mayborn USA, Inc., and Mayborn Group Limited (collectively, “Defendants” or “Mayborn”) seeking a declaratory judgment that Nanobebe is not infringing on Mayborn’s utility patent, U.S. Patent No. 10,952,930 B2 (the “‘930 Patent”). *See generally* ECF Nos. 1 (“Compl.”), 25-1 (‘930 Patent). Mayborn responded with two counterclaims alleging that Nanobebe is infringing two of its utility patents, the ‘930 Patent and U.S. Patent No. 11,207,244 B2 (the “‘244 Patent”). *See generally* ECF Nos. 25 (“Answer & Counterclaims”), 25-2 (‘244 Patent). In connection with these competing claims, the parties have asked the Court to construe the disputed terms of the patents at issue. After a technology tutorial on January 18, 2023, the Court held an approximately seven-hour *Markman* hearing on February 22, 2023. *See generally* *Markman v. Westview Instruments, Inc.*, 517 U.S. 370 (1996). The parties presented arguments and admitted evidence, but, at their election, did not offer live witness testimony. The Court’s constructions of the disputed terms are set forth below.

I. **BACKGROUND**

A. Factual Background

There are two Mayborn patents at issue in this case – the ‘930 Patent and the ‘244 Patent. ECF Nos. 25-1, 25-2. Both patents concern baby bottles with flexible nipple regions. *Id.* According to Mayborn, “the patents-in-suit claim a nipple/collar arrangement that more closely mimics the human breast, better controls and defines nipple flexing to prevent flow blockage from nipple collapse, and improves the air vent structure and arrangement so as to more predictably and reliably reduce the risk of colic.” ECF No. 48 (“Mayborn Claim Br.”) at 1.

The parties initially disputed 16 of the claim terms from the ‘930 and ‘244 Patents. *See* ECF No. 45 (“Am. Joint Claim Terms Chart”). As set forth below, the scope of the parties’ disagreement narrowed over the course of this litigation. At the *Markman* hearing, the parties requested construction of only 10 terms. *See infra* at n.2.

B. Procedural History

Nanobebe filed the Complaint on October 13, 2021. Compl. Mayborn answered and filed two counterclaims on January 13, 2022. Answer & Counterclaims. Nanobebe responded to the counterclaims on February 3, 2022. ECF No. 33. The parties filed an amended joint claim terms chart on August 24, 2022. Am. Joint Claim Terms Chart. Mayborn filed its Claim Construction Statement on September 6, 2022. Mayborn Claim Br. The case was assigned to the undersigned on September 19, 2022. Nanobebe filed its brief responding to Mayborn’s Claim Construction Statement on November 15, 2022. ECF No. 62 (“Nanobebe Claim Br.”). Mayborn filed its reply brief on November 30, 2022. ECF No. 63 (“Mayborn Reply”). The Court held a technology tutorial on January 18, 2023. *See* ECF No. 69 (“Tech. Tutorial Tr.”). On February 22, 2023, the Court held a *Markman* hearing. *See* ECF No. 79 (“Markman Tr.”).

Following the *Markman* hearing, the parties submitted a joint letter addressing questions the Court raised during the hearing. ECF No. 76 (“Joint Letter”).¹

II. LEGAL STANDARD

“It is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (internal quotation marks and citation omitted). When parties dispute the terms of a patent claim, the court partakes in claim construction, an exercise that “falls exclusively within the province of the court, not . . . the jury.” *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 574 U.S. 318, 325 (2015) (internal quotation marks and citation omitted). “[T]he construction of claims is simply a way of elaborating the normally terse claim language[] in order to understand and explain, but not to change, the scope of the claims.” *Embrex, Inc. v. Serv. Eng’g Corp.*, 216 F.3d 1343, 1347 (Fed. Cir. 2000) (internal citation omitted).

Courts consider two forms of evidence to determine the meaning of claim terms. First, courts consider “intrinsic evidence of record, *i.e.*, the patent itself, including the claims, the specification and, if in evidence, the prosecution history.” *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996); *see also Phillips*, 415 F.3d at 1317 (“The prosecution history, which we have designated as part of the ‘intrinsic evidence,’ consists of the complete record of the proceedings before the PTO and includes the prior art cited during the examination of the patent.” (internal citation omitted)). “[I]ntrinsic evidence is the most significant source of the legally operative meaning of disputed claim language.” *Vitronics Corp.*, 90 F.3d at 1582.

As the claims are part of a “fully integrated written instrument,” the specifications are a critical piece of intrinsic evidence. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 978

¹ The Court will not consider the additional letter Mayborn filed (ECF No. 77) as it is not responsive to the specific questions that the Court asked at the *Markman* hearing.

(Fed. Cir. 1995). The Federal Circuit has held that “the specification ‘is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.’” *Phillips*, 415 F.3d at 1315 (quoting *Vitronics*, 90 F.3d at 1582). However, the claims, not the specifications, define the scope of the invention such that a court should not read limitations from the specification into the claim. *Phillips*, 415 F.3d at 1323. For example, where specifications describe specific embodiments of the invention, the claim should not be confined to those embodiments. *Id.*

When intrinsic evidence leaves ambiguity as to the meaning of the claim terms, a court may rely on extrinsic evidence: that is, “all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises.” *Id.* at 1317 (quoting *Markman*, 52 F.3d at 980). However, extrinsic evidence “is generally of less significance than the intrinsic record” and “may not be used ‘to contradict claim meaning that is unambiguous in light of the intrinsic evidence.’” *Profectus Tech. LLC v. Huawei Techs. Co.*, 823 F.3d 1375, 1380 (Fed. Cir. 2016) (quoting *Phillips*, 415 F.3d at 1324).

During claim construction, terms ““are generally given their ordinary and customary meaning,’ which is ‘the meaning that the term would have to a person of ordinary skill in the art [‘POSITA’] in question at the time of the invention.’” *Network-1 Techs., Inc. v. Hewlett-Packard Co.*, 981 F.3d 1015, 1022 (Fed. Cir. 2020) (quoting *Phillips*, 415 F.3d at 1312-13). “In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words.” *Phillips*, 415 F.3d at 1314.

III. DISPUTED TERMS IN THE UTILITY PATENTS

The Court will address the 10 terms of the utility patents that were covered at the *Markman* hearing in the order presented in the Amended Joint Claim Terms Chart.²

A. “A teat portion”

Term	Claim	Mayborn	Nanobebe
“a teat portion”	Claim 14 in ‘930 Patent	“part projecting generally perpendicular to the mouth of the vessel and disposed above the areola portion”	“the entire part projecting generally perpendicular to the mouth of the vessel, disposed above the areola portion, which extends into a baby’s mouth for feeding”

There is no longer a dispute concerning the construction of “a teat portion.” During the *Markman* hearing, the parties agreed to the following construction – “the entire part projecting generally perpendicular to the mouth of the vessel and disposed above the areola portion.”

Markman Tr. at 35:4-10; 42:15-43:18. The Court agrees that this construction comports with the intrinsic evidence presented and adopts this agreed upon construction.

B. “A teat portion having a variable wall thickness”

Term	Claim	Mayborn	Nanobebe
“a teat portion having a variable wall thickness”	Claim 14 in ‘930 Patent	Plain meaning	“a teat portion having a helical groove”

Mayborn proposes the plain and ordinary meaning of the term “a teat portion having a variable wall thickness” and Nanobebe seeks to construe the term as “a teat portion having a

² At the time of the *Markman* hearing, Nanobebe had withdrawn its dispute over 6 of the 16 terms listed in the Amended Joint Claim Terms Chart and accepted Mayborn’s construction. Those terms are: “sloping portion that extends outwardly and downwardly relative to said upper rim”; “a majority of the collar’s outermost surface”; “nipple”; “bite region” / “the mouthpiece defining a bite region”; “downward domed shape that extends outwardly and downwardly from the flex region”; “apart from the mouthpiece.” Nanobebe Claim Br. at 11 n.5, 21 n.10; Tech. Tutorial Tr. at 4:6-16; Am. Joint Claim Terms Chart.

helical groove.” Am. Joint Claim Terms Chart at 3. Mayborn argues that Nanobebe’s construction improperly imposes a limitation from the specification into the claim and conflates the features “variable wall thickness” with “helical groove.” Mayborn Claim Br. at 6-7. Nanobebe argues that the only “variable wall thickness” on the teat portion in the ‘930 Patent is a helical groove as shown in the second embodiment in Figure 4. Nanobebe Claim Br. at 19-20. Nanobebe then contends that, in similar circumstances, courts have construed claims to be limited to what is disclosed. *Id.*

Reviewing the intrinsic evidence, the Court finds that Nanobebe’s proposed replacement of “variable wall thickness” with “helical groove” is inconsistent with several rules of claim construction. First, defining “variable wall thickness” as “helical grooves” would improperly limit the scope of an independent claim based on a restriction arising in a dependent claim. See ‘930 Patent col. 8 l. 40-41, 58-60. It is a fundamental rule of claim construction that “the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim.” *Phillips*, 415 F.3d at 1315. Here, the term in question arises in an independent claim: Claim 14. Claim 15, a claim dependent on Claim 14, describes the inner surface of the teat portion as having “a groove configured to flex in a direction of the liquid flow.” ‘930 Patent col. 8 l. 58-60. Because Claim 15, a dependent claim, describes a type of groove within the teat portion (although not “helical”), Nanobebe’s construction would require the Court to impose a limitation from a dependent clause into an independent claim. Equating the dependent and independent claims in this manner is impermissible because “the dependent claims would have no scope and thus be meaningless.” *Littelfuse, Inc. v. Mersen USA EP Corp.*, 29 F.4th 1376, 1380 (Fed. Cir. 2022).

Next, Nanobebe’s construction would render language in other independent claims superfluous. In the ‘930 Patent, another independent claim illustrates why helical features are

not equivalent to “variable wall thickness.” Claim 1, an independent claim, and Claim 10, a dependent claim, mirror Claims 14 and 15. Claim 1 describes the “teat portion having a variable wall thickness including an aperture.” ‘930 Patent col. 7 l. 10-11. Then, Claim 10 describes the teat portion as having “a helical flow path.” *Id.* col. 7 l. 54-55. These claims demonstrate that helical flow path and variable wall thickness have separate meanings. If the Court were to hold otherwise, the construction “would render additional, or different, language in another independent claim superfluous” *Curtiss-Wright Flow Control Corp. v. Velan, Inc.*, 438 F.3d 1374, 1381 (Fed. Cir. 2006) (describing a general rule of claim construction that interpretations “that would render additional, or different, language in another independent claim superfluous” should be avoided). Moreover, “claim terms are normally used consistently throughout the patent” meaning “the usage of a term in one claim can often illuminate the meaning of the same term in other claims.” *Phillips*, 415 F.3d at 1314. Accordingly, if “variable wall thickness” does not encompass helical features in Claim 1, it should not be read to encompass those features when “variable wall thickness” is used in Claim 14.

Nanobebe’s proposed construction is also improper because it imposes a limitation from the specification into the claim. “The patentee is entitled to the full scope of his claims, and we will not limit him to his preferred embodiment or import a limitation from the specification into the claims.” *Kara Tech. Inc. v. Stamps.com Inc.*, 582 F.3d 1341, 1348 (Fed. Cir. 2009); *Hill-Rom Servs., Inc. v. Stryker Corp.*, 755 F.3d 1367, 1371 (Fed. Cir. 2014) (“While we read claims in view of the specification, of which they are a part, we do not read limitations from the embodiments in the specification into the claims.”). Importing limitations from the specification into the claims is “one of the cardinal sins of patent law,” according to the Federal Circuit.

Blazer v. Best Bee Bros., LLC, No. 2022-1033, 2022 WL 16954848, at *4 (Fed. Cir. Nov. 16, 2022) (quoting *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337,

1340 (Fed. Cir. 2001)). Here, Nanobebe’s construction would use “a tight pitch helical groove” described only in a specification to limit the scope of “variable wall thickness.” ‘930 Patent col. 4 l. 32. This is an improper limitation of the claims using an example found in the specification.

The Court also rejects Nanobebe’s argument that the Court should limit “variable wall thickness” to “helical groove” because the only disclosure of “a teat portion having a variable wall thickness” is the helical groove shown in Figure 4 and identified at 122. Nanobebe Claim Br. at 19-20. “[M]erely because the specification only describes one embodiment is not a sufficient reason to limit the claims to that embodiment.” *Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1372 (Fed. Cir. 2003); *Linear Tech. Corp. v. Int’l Trade Comm’n*, 566 F.3d 1049, 1058 (Fed. Cir. 2009) (holding that even where one embodiment is disclosed, claims should not be narrowed to cover only the disclosed embodiment or examples in the specification).

The Court further finds unpersuasive Nanobebe’s reliance on *Watts v. XL Sys., Inc.*, 232 F.3d 877 (Fed. Cir. 2000) and *Wang Lab’ys, Inc. v. Am. Online, Inc.*, 197 F.3d 1377 (Fed. Cir. 1999) to argue that in certain circumstances, like this case, a specification can limit a claim. Nanobebe Claim Br. at 19. In both *Watts* and *Wang* the inventors used clear language limiting their inventions to the expressed embodiments. The court in *Watts* noted that the patent specification used the language “the present invention utilizes” to expressly limit the invention to structures with a certain feature. *Watts*, 232 F.3d at 883; *see also Poly-Am., L.P. v. API Indus., Inc.*, 839 F.3d 1131, 1136 (Fed. Cir. 2016) (noting that an inventor “may disavow claims lacking a particular feature when the specification describes ‘the present invention’ as having that feature”). Moreover, in *Watts*, the limiting feature in question was essential to distinguish the invention at hand from the prior art. *Watts*, 232 F.3d at 883. Similarly, in *Wang*, the court considered whether the claims covered two systems of processing and displaying computer generated data, or just the system described in the specification. *Wang*, 197 F.3d at 1382-83.

The court held that the claim could not be read to cover a second system because that system was not “sufficiently described as the applicant’s invention to meet the requirements of [35 U.S.C. §] 112.” *Id.* at 1383. As the Federal Circuit explained in *Altiris, Inc. v. Symantec Corp.*, the inventor of the patent at issue in *Wang* also disavowed the broader construction of the claim during prosecution of the patent. 318 F.3d at 1373.

In the present case, Nanobebe has not pointed to any such disclaiming or disavowal language in the ‘930 Patent’s specifications or prosecution history. *See* Nanobebe Claim Br. at 19 (pointing only to an example of variable wall thickness); *see also Hill-Rom Servs., Inc.*, 755 F.3d at 1371-72 (even where the specification describes only a single embodiment, limiting a claim to that embodiment requires clear disavowal language demonstrating an intent to limit the claim); *Openwave Sys., Inc. v. Apple Inc.*, 808 F.3d 509, 513 (Fed. Cir. 2015) (“To find disavowal, we must find that the specification is both so clear as to show reasonable clarity and deliberateness, and so unmistakable as to be unambiguous evidence of disclaimer.” (internal quotation marks and citation omitted)). Here, only the second embodiment (Figure 4) contains a helical groove, and the reference to “a tight pitch helical groove” in the specifications does not contain language restricting the claim or expressing that the “variable wall” is limited to “a tight pitch helical groove.” ‘930 Patent fig. 4, col. 2 l. 15, col. 4 l. 32-38.

Accordingly, the Court adopts Mayborn’s construction that the term “a teat portion having a variable wall thickness” will be construed in accordance with its plain meaning.

C. “Base portion”

Term	Claim	Mayborn	Nanobebe
“base portion”	Claim 14 in ‘930 Patent	“part below the areola portion”	“the lowest portion of the nipple, beginning where the nipple meets the top rim of the vessel, that is mountable to the vessel”

The parties’ competing constructions of “base portion” vary significantly. Mayborn proposes a construction that is based on relative location to another section of the nipple. Mayborn Claim Br. at 7-8. Nanobebe’s construction incorporates a locational element but also includes a requirement that it is “mountable to the vessel.” Nanobebe Claim Br. at 16. Mayborn contends that Nanobebe’s construction misconstrues the role of the flange as documented in the prosecution history and reads a specification limitation into the claim. Mayborn Claim Br. at 8. Nanobebe argues that Mayborn’s proposal ignores the flange, which is also below the areola portion, and states that its proposal is consistent with the specification. Nanobebe Claim Br. at 16-17.

Beginning with the claims, Claim 14 says the feeding bottle has “an areola portion between the teat portion and the base portion” and “a flange depending from the base portion” ‘930 Patent col. 8 l. 43-45. The claim provides the boundaries for the “base portion” in relation to other portions. Figure 1 illustrates that the base (identified as 14) falls beneath the areola portion (identified as 24). *Id.* fig. 1. Figure 4 also illustrates that the base portion (identified as 116) falls beneath the areola portion (identified as 118). *Id.* fig. 4. Mayborn’s construction is therefore consistent with the claim and embodiments. However, the Court agrees with Nanobebe that Mayborn’s definition is incomplete because it does not provide a lower boundary for the base portion. See Nanobebe Claim Br. at 16.

Nanobebe's construction defines that lower boundary using the phrase "the lowest portion of the nipple." *Id.* However, the Nanobebe construction reads in a requirement that the base portion meets the top rim of the vessel and is mountable to the vessel. This is inconsistent with Claim 14 that describes the flange as "being arranged to seal with the vessel," as opposed to the base portion. '930 Patent col. 8 l. 19. There is nothing in Claim 14 that requires contact between the base portion and the vessel.

Mayborn further argues that Nanobebe's construction regarding "mountable to the vessel" would eliminate preferred embodiments of the invention in Figures 1 and 4. Mayborn Reply at 4-5; Markman Hearing, Mayborn Ex. 11 ("Mayborn Markman Presentation") at 40-42. The Court agrees. "A claim construction that excludes a preferred embodiment . . . is rarely, if ever correct and would require highly persuasive evidentiary support." *Epos Techs. Ltd. v. Pegasus Techs. Ltd.*, 766 F.3d 1338, 1347 (Fed. Cir. 2014) (internal brackets and citation omitted). Figure 1 shows a flange that extends from the base at the very bottom of the nipple. '930 Patent fig. 1. In this embodiment, the nipple, which includes the flange, would make contact with the top rim of the vessel at the flange, not at the base, which is positioned above the flange. *Id.* Looking to Figure 4, the embodiment shows the point of connection between the vessel and the nipple at the flange (identified at 139). Therefore, in both embodiments the point of connection with the vessel is not shown to happen at the base, but at the flange. Because Nanobebe's construction would therefore read out two preferred embodiments, the Court declines to adopt Nanobebe's construction.

However, the Court will incorporate a portion of Nanobebe's construction – "the lowest portion of the nipple" – in order to provide the lower boundary that the Mayborn construction lacks. At the *Markman* Hearing, Mayborn confirmed that it would not object to including a bottom limit as "the lowest part of the nipple below the areola portion" as long as the flange is

excluded. Markman Tr. at 124:10-22. This definition is consistent with the intrinsic evidence. The base portion is shown in each embodiment as the bottom of the nipple, excluding the flange, which is “depending from the base portion.” ‘930 Patent figs. 1, 2a, 2b, 4. Accordingly, the Court adopts the following construction for base portion: “the lowest portion of the nipple below the areola portion, excluding the flange.”

D. “Domed configuration” / “a base portion having a domed configuration”/ “domed shape”

Term	Claim	Mayborn	Nanobebe
“domed configuration”/ “a base portion having a domed configuration” /“domed shape”	Claim 14 in ‘930 Patent; Claim 21 in ‘244 Patent	“wide circular base with an arc-shaped cross-sectional profile” Alternatively: “wide circular base with a convex cross- sectional profile”	“having a rounded shape in profile”

While the parties agree that “domed” in the ‘244 Patent has the same meaning in the ‘930 Patent, Mayborn Claim Br. at 18, Nanobebe Claim Br. at 17, the parties offer dueling constructions of “domed configuration” / “a base portion having a domed configuration” / “domed shape.” Am. Joint Claim Terms Chart at 3, 6. Mayborn proposes a “wide circular base with an arc-shaped cross-sectional profile[,]” relying on Figure 4 and the following specification language: “the base portion 116 being shaped like a breast and having a wide, domed configuration.” Mayborn Claim Br. at 8-10. Alternatively, Mayborn suggests a “wide circular base with a convex cross-sectional profile.” Mayborn Markman Presentation at 53. Nanobebe relies on dictionary definitions of “dome” that refer to half of a sphere, or hemispheres, to support its construction of “having a rounded shape in profile.” Nanobebe Claim Br. at 17-18. Mayborn argues that Nanobebe’s proposal cannot be found in the specification and is not reflected in the embodiment or file history. Mayborn Claim Br. at 9-10. In either case, Mayborn

argues, the specifications and embodiments do not necessarily approximate the cross-section of a sphere as Nanobebe’s “round” construction seeks to impose. *Id.*

The Court first looks to the intrinsic evidence to evaluate the proposed constructions. The specification describes the base portion as “being shaped like a breast and having a wide, domed configuration.” ‘930 Patent col. 4 l. 1-3. In examining the initial portion of Mayborn’s construction – “wide circular base” – the specification supports the use of “wide.” *Id.* No party argues that “wide” is a limitation on the claim, and indeed the patent holder proposed the descriptor. The specification also supports Mayborn’s construction of the base as “circular.” See ‘930 Patent col. 4 l. 59-62 (“The screw collar includes an internally threaded cylindrical portion and a downwardly domed peripheral portion surrounding it and extending from an upper end of the cylindrical portion.”); *see id.* col 4. l. 64-67 (“The teat is over-molded onto the screw collar and the domed portion terminates at a central circular orifice . . . ”). At the *Markman* Hearing, Nanobebe did not have a significant issue with the use of “circular.” *Markman* Tr. at 148:17-21. But Nanobebe expressed an issue with the word “base” because base has alternate meanings in the patent. *Markman* Tr. at 148:11-14. The Court agrees and finds “bottom,” as Nanobebe referenced at the hearing, to be a better construction that avoids this confusion. *Id.* at 148:8-16.

In terms of the cross-sectional profile, Nanobebe argues for “a rounded shape in profile” and Mayborn proffers an “arc-shaped cross-sectional profile.” Am. Joint Claim Terms Chart at 3; Mayborn Markman Presentation at 53. The Court finds that Nanobebe’s construction does not accord with the intrinsic evidence. Nanobebe refers the Court to the dictionary definition of “domed”: “a . . . hemispherical roof or ceiling.” Nanobebe Claim Br. at 18. Because “hemispherical” is defined as “the shape of half of a sphere,” Nanobebe argues that the hallmark of a domed shape is that it is “rounded.” *Id.* At the *Markman* hearing, Nanobebe reiterated that the shape of the base portion is the “upper half of a sphere” “consistently in the patent across

figures.” Markman Tr. at 143:14-18. Although dictionary definitions are permissible as extrinsic evidence, “[t]he court must ensure that any reliance on dictionaries accords with the intrinsic evidence: the claims themselves, the specification, and the prosecution history.” *Free Motion Fitness, Inc. v. Cybex Int'l Inc.*, 423 F.3d 1343, 1348 (Fed. Cir. 2005). Contrary to its counsel’s representations, Nanobebe’s proposal is inconsistent with the intrinsic evidence. The embodiments do not show partial spheres, or hemispheres, even if rendered three-dimensionally. ‘930 Patent figs. 1, 2a, 2b, 4; ‘244 Patent figs. 1, 2a, 2b, 4. Rather, the embodiments show a gentler arc at the base portion (identified at 116) and a base portion (identified at 134) that is rather steep, although still curved. ‘930 Patent fig. 4; ‘244 Patent fig. 4. The Court is persuaded that “arc-shaped” is the better description. An arc is defined as “something arched or curved.” *Arc*, Merriam Webster, <https://www.merriam-webster.com/dictionary/arc> (last visited Feb. 24, 2023). Even Nanobebe provides an example of a spheroid flattened at the poles in its examples of a “dome,” rather than only a sphere. Markman Hearing, Nanobebe Ex. 6 (“Nanobebe Markman Presentation”) at 54.

While the Court was initially concerned about the direction of the curve or arc, and considered terms like convex to capture the outward orientation of the arc from the center of the vessel, on further consideration this is not necessary. Arches or curves, as arc is defined, necessarily curve outward. In Euclidean geometry, arcs are “a segment of a curve, most often a circle, in a two-dimensional plane.” *Arc*, Encyclopedia.com, <https://www.encyclopedia.com/science-and-technology/mathematics/mathematics/arc> (last visited Apr. 4, 2023). Segments of circles (or ellipses or other curved shapes) necessarily curve outward from the center of the shape. The intrinsic evidence supports this outward curve or arc. ‘930 Patent Figs. 1, 2a, 2b, 4, col 8. l. 16 (describing a collar having “an outermost surface having a sloping portion that extends outwardly and downwardly”); ‘244 Patent figs. 1, 2a, 2b, 4, col. 8 l. 16-18 (“the collar

and the lower portion of the nipple together define a downward domed shape that extends outwardly and downwardly”). The claim term will be read in the context of the entire patent, which would support an outward curve or arc. *See Phillips*, 415 F.3d at 1313 (“Importantly, the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.”).

Nanobebe’s reliance on Mayborn’s prosecution history with respect to the Uehara patent is also unconvincing. Nanobebe Claim Br. at 18-19. Nanobebe argues that Mayborn was required to “amend[] the claims during prosecution to require a vent that extends through a base portion having a domed configuration and distinguished [Uehara] prior art with a non-rounded base.” *Id.* (emphasis omitted). As Mayborn points out, the prosecution history demonstrates that Mayborn drew a distinction between the air valve extending through the flat wall portion of the flange in the Uehara invention, and the air vent in the present patent that extends through the domed configuration. ECF No. 62-34 at 6. Distinguishing the flat wall portion of the Uehara invention from the domed configuration in the present invention does not undermine Mayborn’s construction of “domed configuration” as a curved or arc-shaped configuration.

Finally, Nanobebe argues that Mayborn’s constructions encompass non-rounded shapes to purposefully sweep in the Nanobebe product. Nanobebe Claim Br. at 17. The Court is not and will not construe a claim based on the effect it may have on the accused device and others. *See Wilson Sporting Goods Co. v. Hillerich & Bradsby Co.*, 442 F.3d 1322, 1330 (Fed. Cir. 2006) (“This court, of course, repeats its rule that claims may not be construed with reference to the accused device.” (internal quotation marks and citation omitted)).

Therefore, the Court adopts the following construction of a domed configuration: “wide circular bottom with an arc-shaped cross-sectional profile.”

E. “An areola portion”

Term	Claim	Mayborn	Nanobebe
“an areola portion”	Claim 14 in ‘930 Patent	“part extending beyond the bottom of the teat portion”	“a surface area, that includes a different characteristic and functionality than the rest of the nipple, surrounding and extending beyond the bottom of the teat portion [as construed by Nanobebe]”

The parties both propose constructions of “an areola portion” that include the characteristic of “extending beyond the bottom of the teat portion.” Am. Joint Claim Terms Chart at 3. Nanobebe further construes the areola portion as a surface area with characteristics and functionality traits that differ from the rest of the nipple. Nanobebe Claim Br. at 13-16. Mayborn contends that Nanobebe’s construction incorrectly limits the areola to just a surface area. Mayborn Claim Br. at 10-11. Nanobebe’s construction also restricts the areola to certain characteristics and functionalities listed in some embodiments, but not required in the claims, according to Mayborn. *Id.* at 11. Nanobebe argues that Mayborn’s construction of “part extending beyond the bottom of the teat portion” is ambiguous. Nanobebe Claim Br. at 13-16.

The Court agrees with Mayborn that the claims do not limit the areola portion to a surface area, contrary to Nanobebe’s interpretation. The areola portion itself is described in a dependent claim as having “an inner surface.” ‘930 Patent col. 8 l. 65-66. This description is only possible if the areola portion means something beyond surface level. “Surface” would be redundant if “areola portion” was a surface area. *See Dow Chem. Co. v. United States*, 226 F.3d 1334, 1342 (Fed. Cir. 2000) (construing independent claim as broader than dependent claim to avoid rendering dependent claim “redundant”). During the *Markman* hearing, Nanobebe also agreed

that “part” or “region” would be an acceptable construction instead of “surface area.” Markman Tr. at 84:22-85:5.

Next, the Court does not agree with Nanobebe’s argument that the areola portion necessarily requires “a different characteristic and functionality than the rest of the nipple.” Nanobebe Claim Br. at 13. First, this proffered limitation is vague and would not provide guidance to interpret the claim. Second, the claims show that the existence of certain characteristics and functionality, like a flex region, do not define the areola portion. While some areola portions in the claim do have specific characteristics like a flex region (‘930 Patent col. 7. l. 20-23), these specific characteristics do not define the areola portion. Two examples from the claims demonstrate this. First, Claim 1, an independent claim, has an areola portion with “a plurality of thinned regions.” ‘930 Patent col. 7 l. 20-23. However, the areola in Claim 14, also an independent claim, does not contain a similar description. *Id.* col. 8 l. 43-44. Therefore, “a plurality of thinned regions” is not required for an areola. Second, Claim 18, a dependent claim to Claim 14, has “a groove extending circumferentially” on the inner surface of the areola portion. *Id.* col. 8 l. 65-68. But the Court does not read the groove from Claim 18 to define areola portion because limits from dependent claims cannot generally restrict independent claims. *See Phillips*, 415 F.3d at 1315. Therefore, the Court does not read the characteristic of a groove extending circumferentially in Claim 18 into Claim 14. Nanobebe’s argument that the embodiments of the areola portion include a flex region of different functionality is also unavailing. *See Nanobebe Claim Br.* at 13-15. While the embodiments do describe flex characteristics, the Court will not read limitations from embodiments, as a part of the specification, into claims. *See Kara Tech. Inc.*, 582 F.3d at 1348. These examples illustrate that while some areola portions do have special characteristics, the areola portion also exists without these characteristics.

Nanobebe rightfully points out that the Mayborn construction – “part extending beyond the bottom of the teat portion” – does not provide a lower boundary and would therefore include the flange, the collar and the vessel, all of which extend beyond the bottom of the teat portion. *See Nanobebe Markman Presentation at 44.* Presumably recognizing that this was a deficiency in Nanobebe’s own construction, at the *Markman* hearing, Nanobebe offered an addition to its construction of a lower boundary: “extending beyond the baby’s lips to the widest diameter above the top rim of the vessel.” Nanobebe Markman Presentation at 36; Markman Tr. at 75:8-12. The Court will not adopt Nanobebe’s construction. At the outset, the Court declines to construe the terms in connection with the size of babies’ mouths or lips, which could differ. Moreover, Nanobebe offers the deposition of Mayborn’s expert describing the regions of an embodiment and an exhibit from the deposition to show that the areola portion is the widest part of the teat. Nanobebe Claim Br. at 14-15. That expert identified one embodiment as having an areola that is “approaching the widest parts.” *See ECF No. 62-24* (“Nanobebe Claim Br., Ex. 23”) at 218: 4-12. However, an expert’s testimony regarding a description of a single embodiment of an areola portion is not definitive since an embodiment is merely an example of the claims. The Court will not rely on the expert testimony to read a limit from an embodiment into a claim. *See Kara Tech. Inc.*, 582 F.3d at 1348. Therefore, the Court will not adopt Nanobebe’s proposed lower boundary.

However, the Court does agree that a lower boundary is necessary and that Mayborn’s construction is deficient without one. Because the claim defines the “areola potion” as “between the teat portion and the base portion,” ‘930 Patent col. 8 l. 43-44, the Mayborn construction requires the addition of “bounded by the base” to provide a lower boundary. Mayborn agreed with this addition at the *Markman* hearing. Markman Tr. at 70:19-71:7.

Finally, even if the aforementioned lower boundary was included, Nanobebe urges the Court to reject Mayborn's proposed construction that defines the parameters of the areola portion based on its location relative to the teat portion and the base portion, because it creates an imprecise construction. Markman Tr. at 71:22-72:24. The Court does not agree. Courts regularly have defined regions based on their relative position to other regions. *See, e.g., Boss Indus., Inc. v. Yamaha Motor Corp. U.S.A.*, 333 F. App'x 531, 534 (Fed. Cir. 2009) (construing "base section" as "the bottom support structure of the snowmobile seat"). As long as a POSITA can ascertain the scope of the claims, nothing prevents a court from defining an element of an invention in relation to another part of the invention. The POSITA would be able to construe the claim here based on the entirety of the patent. *Sci. Applications Int'l Corp. v. United States*, 154 Fed. Cl. 594, 623 (2021) ("[T]he plain meaning is not the meaning of the term in the abstract but is rather the plain meaning as understood by a POSITA after reading the patents[.]")

Therefore, the Court will construe "areola portion" as "the part extending beyond the bottom of the teat portion, bounded by the base."

F. "At least partially inwardly"

Term	Claim	Mayborn	Nanobebe
"at least partially inwardly"	Claim 14 in '930 Patent	Plain meaning	Indefinite

The parties dispute the meaning of "at least partially inwardly" contained in the fourth descriptive clause for a one-way air inlet valve which is, "disposed at least partially inwardly from the collar." '930 Patent col. 8 l. 49-50; Am. Joint Claim Terms Chart at 4. Mayborn proposes adopting the phrase's plain meaning, which it contends offers sufficient clarity for a POSITA to understand the scope of the patent. Mayborn Claim Br. at 11-12. Nanobebe argues that the clause suffers from a lack of "definiteness." Nanobebe Claim Br. at 20-21. The Court

considers whether a POSITA could derive the scope of Mayborn's patent, understanding that Nanobebe has the burden of demonstrating indefiniteness.

“[A] patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901 (2014). The challenging party has “the burden of proving indefiniteness by clear and convincing evidence.” *BASF Corp. v. Johnson Matthey Inc.*, 875 F.3d 1360, 1365 (Fed. Cir. 2017). “The definiteness requirement, so understood, mandates clarity, while recognizing that absolute precision is unattainable.” *Nautilus, Inc.*, 572 U.S. at 910. “[A] patentee need not define his invention with mathematical precision in order to comply with the definiteness requirement.” *Invitrogen Corp. v. Biocrest Mfg., L.P.*, 424 F.3d 1374, 1384 (Fed. Cir. 2005) (internal quotation marks omitted). “[T]he certainty which the law requires in patents is not greater than is reasonable, having regard to their subject-matter.” *Nautilus*, 572 U.S. at 899 (internal quotation marks and citation omitted).

Nanobebe argues that the term “at least partially inwardly” does not provide sufficient clarity regarding the direction of the vent. Nanobebe Claim Br. at 21. In support of its indefiniteness argument, Nanobebe points to Figure 4 which only discloses the location of the vent, but does not clarify the meaning of “at least partially inwardly.” *Id.* Nanobebe asserts that “partially inward” is capable of multiple meanings: namely, “inwardly in either the axial or radial direction or a valve positioned on an angle towards the center of the collar.” *Id.* For example, Claim 1 uses “inwardly” but clarifies the orientation with the term “radially,” unlike Claim 14, which lacks a modifier. *Id.* Finally, Nanobebe takes issue with the term “partially.” Nanobebe argues that a valve is either disposed inwardly in a specific direction or it is not. *Id.*

The Court is not convinced that Nanobebe has demonstrated by clear and convincing evidence that a POSITA could not understand “at least partially inwardly.” A POSITA would review the phrase in the context of the claim which provides for: “a one-way air inlet valve (i) extending through said base, (ii) projecting downwardly from the base portion, (iii) having a length that does not extend past the collar’s lower rim, and (iv) disposed at least partially inwardly from the collar.” ‘930 Patent col. 8 l. 46-50. The claim language teaches the vent’s relative location, through the base; an orientation, “projecting downwardly”; and a lower limit, not extending beyond the collar’s lower rim. The final descriptive term – “disposed at least partially inwardly” – clarifies the valve’s location in relation to another element of the invention: the collar.

Two embodiments shed further light on the valve’s location in relation to the collar. Figure 4 shows a cross section of the invention. The vent, identified as 126, is located next to the top of the screw collar. The vent is positioned against the inner edge of the collar towards the center of the invention: i.e., inwardly.

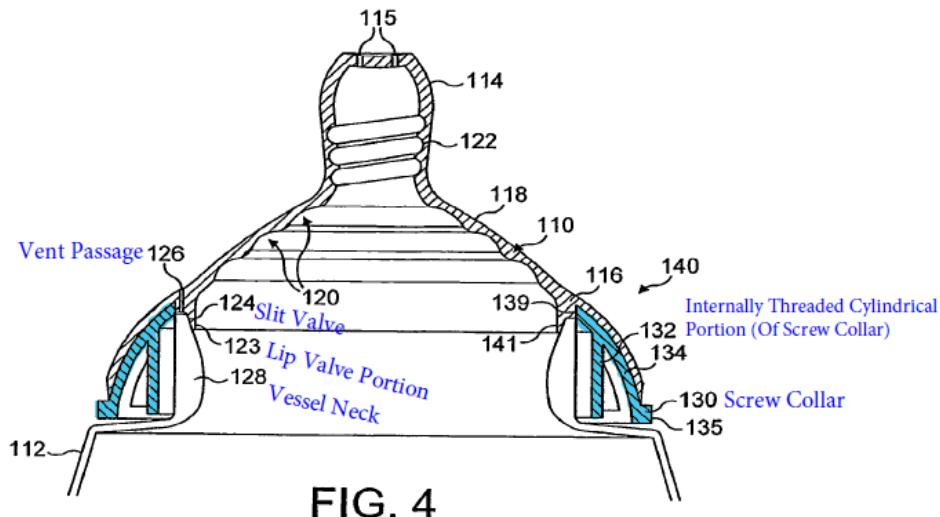
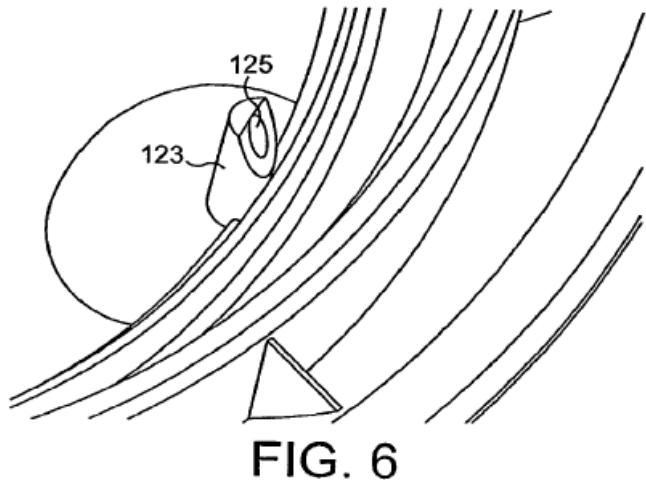


FIG. 4

Figure 6 shows the underside of the invention viewed from the collar. The valve portrayed (referred to as a lip valve) lies slightly within the collar (identified at 123). Therefore, the embodiment shows a valve that is disposed “at least partially inwardly” from the collar.



The Court interprets “inward” as towards the center of the invention. In the context of the valves, interpreting “inward” as towards the center of the invention is consistent with another use of the term “inward.” The specification describes the collar as having an internal lug “which projects inwardly from the inner face.” ‘930 Patent col. 5 l. 52-54. This lug is also depicted in Figure 7b. Here, the lug (identified at 410) is connected from the inside wall of the collar and is oriented “inwardly” towards the center of the invention.

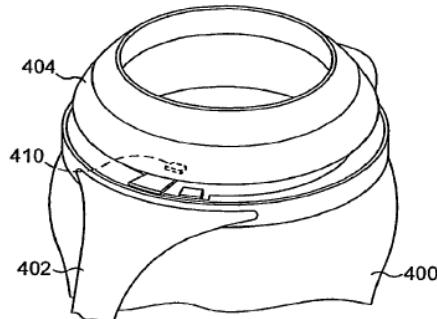


FIG. 7b

This construction is also supported by the definition of inward: “directed toward the interior.”

Inward, Merriam Webster, <https://www.merriam-webster.com/dictionary/> (last visited Apr. 11, 2023). Therefore, the Court is not persuaded that “inward” would be unclear to a POSITA since “inward” refers to a position relative to the collar.

Nanobebe next argues that “at least partially” is indefinite because a valve is either disposed inward or it is not. The Court disagrees. “At least partially” means that at least part of the valve must be inward of the collar, but all of the valve does not need to be inward of the collar. In fact, some of the valve may overlap with the collar. Figure 6 shows an example of a “partially inward” valve. *See* Mayborn Markman Presentation at 77; ECF No. 63-1, Fletcher Decl. ¶ 35. “At least partially inward” means that the valve could be completely inward from the collar, as in Figure 4, or partially inward from the collar, as in Figure 6. The patent does not need to determine the location of the valve with absolute precision, but rather with enough certainty to illustrate what the patent protects. As the Federal Circuit has held, “[t]his balance permits [s]ome modicum of uncertainty to ensur[e] the appropriate incentives for innovation, but it also provides a meaningful definiteness check to prevent patent applicants from inject[ing] ambiguity into their claims.” *One-E-Way, Inc. v. Int'l Trade Comm'n*, 859 F.3d 1059, 1062-63 (Fed. Cir. 2017) (internal quotation marks and citations omitted).

The Court is not persuaded by the supplemental cases Nanobebe cites in support of its argument that the Court on claim construction should not adopt constructions that “fix” claims that would otherwise be indefinite. In *Horizon Pharma, Inc. v. Dr. Reddy’s Lab’ys, Inc.*, the Federal Circuit affirmed the district court’s invalidation of a patent for indefiniteness and noted that the district court need not have redrafted claims that were otherwise nonsensical at the claim construction stage. 839 F. App’x 500, 505 (Fed. Cir. 2021); *see also Chef Am., Inc. v. Lamb-Weston, Inc.*, 358 F.3d 1371, 1374 (Fed. Cir. 2004) (“Even a nonsensical result does not require the court to redraft the claims of the [patent].” (internal quotation marks omitted)). Here, Claim 14 is not nonsensical. As stated previously, when read in context, the plain language of the claim is clear. *Becton Dickinson & Co. v. C.R. Bard, Inc.* is similarly inapposite here. In *Becton Dickinson*, the Federal Circuit reversed the district court when it found that claims were invalid under 35 U.S.C. § 103 and then proceeded to rewrite the claims to add specific language to make them dependent on another claim. *See* 922 F.2d 792, 799 n.6 (Fed. Cir. 1990). This Court is not rewriting any independent claims to make them dependent claims.

Finally, the Court’s conclusion is not altered by Nanobebe’s reliance on an expert declaration that restates its arguments. The submission of expert testimony attesting to the indefiniteness of a term is not conclusive. *See RetailMeNot, Inc. v. Honey Sci. Corp.*, No. 18-cv-937 (CFC) (MPT), 2019 WL 6337719, at *11 (D. Del. Nov. 27, 2019) (construing term during claim construction that patent challenger deemed to be indefinite because the expert testimony that the patent challenger submitted did not “establish by clear and convincing evidence at this stage that the term is indefinite”). Indeed, Mayborn’s expert states otherwise. *See* Fletcher Decl. ¶ 35 (opining that “[i]n figure 6, a POSITA would understand that the valve is disposed partially inward from the collar because it is seen, and part of the valve is radially outward of the collar’s inner rim”). In any event, expert reports are extrinsic evidence, and such evidence cannot

contradict intrinsic evidence. *Phillips*, 415 F.3d at 1318 (“[A] court should discount any expert testimony that is clearly at odds with the claim construction mandated by the claims themselves, the written description, and the prosecution history, in other words, with the written record of the patent.” (internal citation omitted)). In reaching its conclusion, the Court relied on intrinsic evidence and finds that “the intrinsic evidence fully determines the proper construction of the contested claim term.” *Profectus Tech. LLC*, 823 F.3d at 1381 (quoting *Cambrian Sci. Corp. v. Cox Commc’ns, Inc.*, 617 F. App’x 989, 993 (Fed. Cir. 2015)).

Accordingly, the Court finds that Nanobebe has not met its burden of showing by clear and convincing evidence that the term “at least partially inwardly” is indefinite. The Court will construe the term “at least partially inwardly” with its plain meaning.

G. “Mouthpiece”

Term	Claim	Mayborn	Nanobebe
“mouthpiece”	Claims 21, 24, and 27 in ‘244 Patent	“part projecting generally perpendicular to the mouth of the vessel and disposed above the areola portion”	“teat portion, i.e., the entire part projecting generally perpendicular to the mouth of the vessel, disposed above the areola portion, which extends into a baby’s mouth for feeding”

Both parties agree that “mouthpiece” should be construed the same way as “teat portion.” Mayborn Claim Br. at 13; Nanobebe Claim Br. at 24-25; Mayborn Reply at 9; Markman Tr. at 29:8-30:21. For the reasons stated above, the Court will construe “mouthpiece” as “the entire

part projecting generally perpendicular to the mouth of the vessel and disposed above the areola portion.”

H. “Flex region”

Term	Claim	Mayborn	Nanobebe
“flex region”	Claim 21 in ‘244 Patent	“a region having surface characteristics that control flexing”	“a region having characteristics, e.g., grooves or channels, specifically designed to enable flexing”

The parties’ proposed definitions of “flex region” differ in four ways. First, Mayborn’s construction identifies it as a region having “surface characteristics.” Second, Nanobebe provides representative examples of the region’s characteristics such as grooves or channels. Third, Nanobebe suggests that the flex characteristics must be “specifically designed to enable flexing.” Fourth, and the area of most significant dispute, Mayborn proposes that the region “control flexing” while Nanobebe asserts that the region “enable flexing.” *See Am. Joint Claim Terms Chart at 5.*

As for the first difference, Nanobebe no longer seems to object to Mayborn’s inclusion of “surface” to modify characteristics. Nanobebe did not dispute this inclusion at the *Markman* hearing and when the Court asked if it was still a live issue, counsel for Nanobebe stated that it was “not sure exactly why [Mayborn] chose surface characteristics here” but that “our issue is really fundamentally with the controlling flex being broad enough to cover both increasing and decreasing flexibility.” *Markman Tr.* at 209:22-210:1. In any event, the Court agrees with the inclusion of “surface.” Mayborn points to multiple descriptions of flex channels in the specifications which describe the characteristics as “surface.” Mayborn Claim Br. at 13-14. The specification describes “a flex region comprising three grooves or flex channels extending around an inner surface” lending support to Mayborn’s proposal. ‘244 Patent col. 2 l. 66 – col. 3

1. 1. The specification also states: “the flex channels in the flex region can be of any appropriate profile for example square, semi-circular or triangular in cross-section and can be provided on the inner or outer surface of the teat[.]” *Id.* col. 6 l. 34-37.

Second, Nanobebe proposes including representative examples of the region’s characteristics such as grooves or channels in the construction. Mayborn argues that including these examples would limit the claim using the embodiments and are confusing. Mayborn Claim Br. at 14. Nanobebe contends the examples are helpful illustrations and are not a limitation because of the phrase “e.g.” Nanobebe Claim Br. at 24; *see Phillips*, 415 F.3d at 1323 (noting that embodiments generally do not limit claims). While the Court agrees that examples would not limit the claim, Nanobebe has not provided a good reason why such examples are necessary as part of the claim construction, and the examples risk confusing a jury or at the very least anchoring the jury to specific conceptions of the embodiment. *See C&M Oilfield Rentals, LLC v. Apollo Lighting Sols. Inc.*, No. 6:21-CV-00544 (ADA), 2022 WL 1050318, at *6 (W.D. Tex. Apr. 7, 2022) (declining to include examples in embodiment despite inclusion of “e.g.” due to risk of jury confusion). Therefore, the Court will not include examples suggested by Nanobebe.

Third, Nanobebe’s construction includes a reference that the flex characteristics must be “specifically designed to enable flexing.” The Court declines to add this qualification. “Because patent infringement is a strict liability offense,” adding an intent requirement that a feature was “designed” for a specific purpose is improper. *See In re Seagate Tech., LLC*, 497 F.3d 1360, 1368 (Fed. Cir. 2007), *abrogated on other grounds by Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 579 U.S. 93 (2016). Introducing the intent of the designer into claim construction injects needless subjectivity, confusion, and irrelevance. *See United Servs. Auto. Ass’n v. PNC Bank N.A.*, No. 2:20-cv-00319 (JRG), 2021 WL 5451020, at *19 (E.D. Tex. Nov. 22, 2021) (“[The] proposal of introducing a ‘goal’ into the construction is unclear, lacks sufficient support in the intrinsic

record, and would tend to confuse rather than clarify the scope of the claims.”). The functionality of the region is the operative factor, rather than the intent of the designer.

Fourth and finally, the parties dispute how to characterize the nature of the flexibility of the flex region. Mayborn draws on the specification and the prior art and chooses the word “control” to characterize the flexing of the region. Mayborn Claim Br. at 15. Nanobebe argues that “control” is not disclosed in the patent, and is not the correct term because controlling flexing does not necessarily mean that the flex region increases or enhances flexibility, which is essential given that the ‘244 Patent only discloses and concerns nipples with increased flexibility. Nanobebe Claim Br. at 22-23. Mayborn argues that the use of the word “control” is the appropriate term because it reflects that the invention makes flexing “more defined and predictable.” Mayborn Claim Br. at 15.

The Court agrees with Mayborn’s construction based on the intrinsic evidence. The specification provides that this invention relates to a baby bottle with a “nipple of increased flexibility and functionality.” ‘244 Patent col. 1 l. 22-23. While Nanobebe focuses on the first part of this specification – “increased flexibility” – the specification also refers to increased “functionality.” *Id.* Such functionality improvements are described in the patent. The specification describes how the invention was designed to improve upon prior inventions which used a “progressively thinning wall region” to allow for flexing, but “the point at which flexing [took] place [in prior inventions was] undefined and unpredictable.” ‘244 Patent col. 1 l. 40-43. The specifications also explain that this invention seeks to improve on prior art such as the Pigeon patent with a grooved nipple that “allow[ed] [fo]r stretching of the nipple but only in a constrained direction and with the risk of flow blockage if the nipple collapses.” ‘244 Patent col. 1 l. 43-46.

As an improvement, the present invention uses flex channels so that “the point of flexure is clearly defined.” *Id.* col. 2 l. 15-17. The result in the invention is a “flexible portion [that] also provides a pumping action on liquid in the bottle as the teat portion oscillates or reciprocates back and forth.” *Id.* col. 3 l. 41-43; *see id.* col. 3 l. 53-56 (“As an infant sucks on the teat, the teat portion flexes back and forth as a result of the respective collapsing and extending of the flex region grooves.”). The intrinsic evidence further supports that the flex region moves in predictable patterns, that is it extends, retracts, oscillates, and reciprocates during feeding. *See id.* col. 3 l. 41-43, 53-56. Given this intrinsic evidence, the Court agrees with Mayborn that “control” is a more appropriate construction than Nanobebe’s suggestion of “enable” because the invention, through the flex region, improves upon prior inventions by controlling the flexing in contrast to prior art that had undefined and unpredictable flexing and nipple collapse issues. *See* ‘244 Patent col. 1 l. 37-48; Markman Tr. at 183:10-184:12. Nanobebe’s reliance on the specification that states “[t]he flex region allows flexing of the teat” is not persuasive. Nanobebe Claim Br. at 23 (quoting ‘244 Patent col. 3 l. 7-8). In the same column, the specification refers to flexing “as described below” – that is, flexing with defined oscillating and reciprocating patterns. ‘244 Patent at col. 3 l. 41-43. In short, Nanobebe’s construction of “enhancing flexibility” does not adequately capture the notion that the flex region does more than simply increase or enhance flexibility.

Although not bound by their decision, the Court is further persuaded by the construction of a panel of Administrative Law Judges from the Patent Office Trial and Appeal Board (PTAB) in an *Inter Partes* Review (IPR) proceeding brought by Comotomo against Mayborn regarding the ‘244 Patent. *See* Markman Tr. at 206:3-12; Markman Hearing, Mayborn Ex. 15. To construe the terms in the ‘244 Patent, the panel looked to the disclosures in the specification and adopted the term “control” to construe the flex region, as Mayborn proposed. Mayborn Ex. 15 at

13. It is true that Comotomo argued for the plain meaning during the claim construction and did not argue, as Nanobebe does here, for a construction using the phrase “enhance” flexing. *Id.* at 10. The panel also did not examine the question of whether the flex region should be interpreted in a manner than captures only increased flexibility. *Id.* at 10-13. However, the panel had before it the intrinsic evidence, including the claim language and specifications. The panel noted that the ‘244 Patent sought to improve upon the prior art with flex channels so that “the point of flexure is clearly defined.” *Id.* at 4. And after it ultimately interpreted “flex region” to “contain structural components that provide characteristics that control flexing of the structure,” it then went on to describe some of the components such as grooves or flex channels and how they provided for “a bellows action as well as flexing in a direction perpendicular to the fluid flow direction.” *Id.* at 13. This assessment recognizes that the flex region ensures that the flexing is happening in a particular manner – not in a manner that is “undefined and unpredictable” as the prior art was described. ‘244 Patent col. 1 l. 40-43. The Court finds, just as the panel did, that describing the flex region as one which has characteristics that “control flexing” is therefore consistent with the intrinsic evidence.

For all of these reasons, the Court construes “flex region” as “a region having surface characteristics that control flexing.”

I. “Flex of the mouthpiece towards and away from a lower portion of the nipple”

Term	Claim	Mayborn	Nanobebe
“flex of the mouthpiece towards and away from a lower portion of the nipple”	Claim 21 in ‘244 Patent	Plain meaning	“up and down movement of the mouthpiece relative to a lower portion of the nipple”

The final dispute between the parties concerns the term “flex of the mouthpiece towards and away from the lower portion of the nipple.” Mayborn is proposing the plain meaning, and

Nanobebe is suggesting a construction of “up and down movement of the mouthpiece relative to a lower portion of the nipple.” Am. Joint Claim Terms Chart at 6.

Nanobebe seeks to substitute “up and down” for “towards and away” in order to clarify the direction of flexing. Nanobebe Claim Br. at 25. Mayborn argues that Nanobebe’s suggestion discounts the multi-axial direction of the movement involved in a baby’s feeding. Mayborn Claim Br. at 16-17. Mayborn’s proposal is supported by the patent, including by the embodiments, which show multi-axial movement. The specifications describe both oscillating and reciprocating movement, which is multi-axial. ‘244 Patent col. 3 l. 41-43. Towards and away from the lower portion of the nipple encompasses this multi-axial movement of the mouthpiece.

Therefore, the Court adopts the plain meaning construction of “flex of the mouthpiece towards and away from a lower portion of the nipple.”

IV. CONCLUSION

For the foregoing reasons, the disputed terms, as set forth in the parties’ claim construction submissions and at argument, are construed as set forth above.

Dated: April 18, 2023
New York, New York

SO ORDERED.



JENNIFER L. ROCHON
United States District Judge